

A NEW GENUS AND TWO NEW SPECIES OF SYRPHIDAE FROM CHINA (DIPTERA, SYRPHIDAE)

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Abstract A new genus and two new species of Syrphidae, *Lamellidorsum* gen. nov., *Lamellidorsum piliflavum* sp. nov., *Lamellidorsum pilinigrum* sp. nov., are described from Qinling Mountains, Shaanxi Province. Type specimens are deposited in Shaanxi Bioresource Key Laboratory, Shaanxi University of Technology, Shaanxi Province, China.

Key words Diptera, Syrphidae, new genus, new species, China.

A new genus and two new species of Syrphidae are described from Qinling Mountains, Shaanxi Province, China. The descriptions and illustrations are given. Type specimens are deposited in Shaanxi Bioresource Key Laboratory, Shaanxi University of Technology, Shaanxi Province, China.

Lamellidorsum gen. nov.

Eyes bare. Frons and face yellow. Facial tubercle small and obtusely circular. Antennae yellow, with segment 3 nearly rounded. Mesonotum black, tinged with aeneous and dark yellow laterally. Scutellum yellow, with yellow hairs at least on anterior corners laterally. Flat anterior portion of mesopleuron without long and erect hairs. Upper and lower hair patches of sternopleura separated widely throughout. Metasternum bare. Hind coxa without hairs at posteromedian apical angle. Wing covered with microtrichia, without any bare areas. Posterior margin of wing with a series of minute, discrete, closely spaced, black sclerotized dots. Abdomen narrow and long, almost parallel laterally; tergites 3 and 4 each with a broad transverse yellow band on basal portion. Surstyli of male terminalia nearly triangular in lateral view. Lingua as long as lateral arms and apical end sharpened. Superior lobes semilunar. Dorsum of distal portion of aedeagus flat, extending laterally, almost rectangle in dorsal view, with lateral margins more or less contracted near distal part, middle of distal margin slightly projected triangularly. Ventral part of aedeagus base ridged, with lower portions of posterior end more or less extending laterally.

Type species: *Lamellidorsum piliflavum* sp.

nov.

The new genus is similar to *Meliscaeva* Frey and *Melangyna* Verrall. It differs from *Meliscaeva* Frey by having flat anterior portion of mesopleuron, long and erect hairs absent; from *Melangyna* Verrall by having hind margin of wing, with a series of minute, discrete, closely spaced, black sclerotized dots, and tergites 3 and 4, each with broad transverse yellow bands basally. Male terminalia distinct.

Etymology. The generic name is derived from the Latin *Lamell-* (flat) and *dorsum* (dorsum), referring to dorsum of distal portion of aedeagus flat and extending laterally, almost rectangle in dorsal view.

Lamellidorsum piliflavum sp. nov. (Figs 1-7)

Male. Head hemispherical. Eyes bare, holoptic, attached, slightly less than height of vertical triangle. Vertex shining black, covered with dark yellow hairs. Ocellar triangle covered with black hairs, ocelli arranged in equilateral triangle. Occiput densely pollinose and covered with yellow hairs. Frons dark yellow, covered with yellow pollen and black hairs on basal portion, scattered yellow hairs on middle part. Anterior angle of eyes about 50°. Face narrow, dark yellow, yellow pollinose, with yellowish hairs. Facial tubercle bared, obviously prominent, small and obtusely rounded. Cheeks dark yellow, covered with yellow hairs. Antennae dark yellow, basal two segments darker. The third antennal segment longer than its height, apex broadly rounded. Arista brownish yellow, with the third of its basal portion covered with pubescence, and the other part slender.

Mesonotum black, tinged with bronze, the rims

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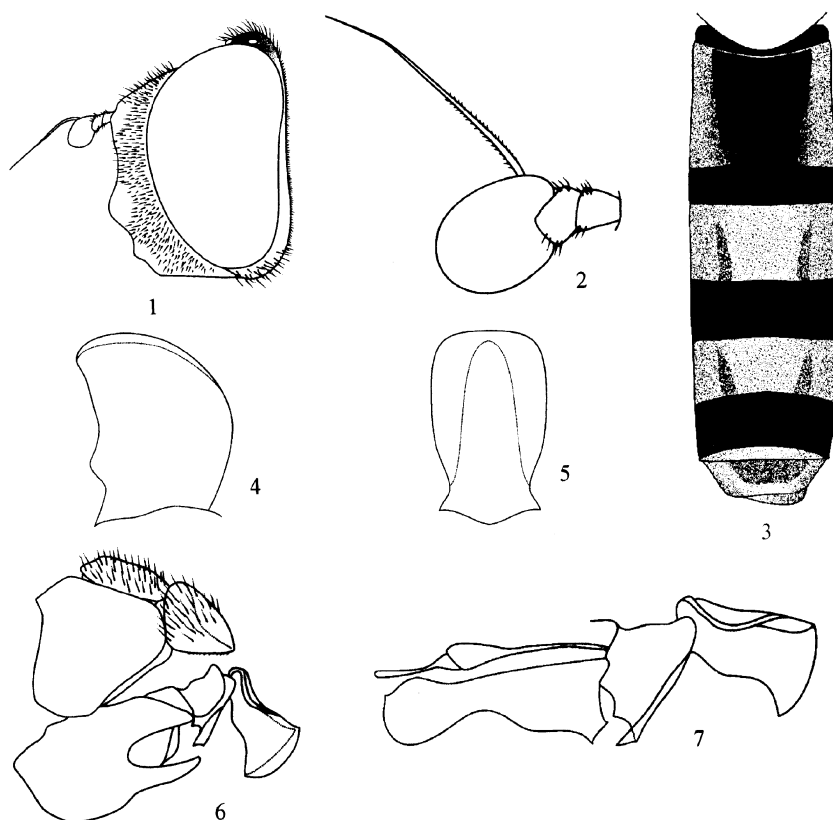
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dark yellow laterally, covered with brownish yellow hairs. Scutellum yellow, covered with yellow hairs. Subscutellar fringe brownish yellow and dense. Pleura shining black, covered with dark yellow hairs and gray pollen on middle area. Flat anterior portion of mesopleuron without long and erect hairs, upper and lower hair patches separated widely throughout. Metasternum bare. Posteromedian apical angle of hind coxa without a tuft of long hairs. Legs mainly brownish yellow, covered with yellow hairs. Coxae and trochanters of fore and middle legs dark brown. Hind legs with coxae and trochanters black brown; basal 5/6 of hind femora black brown, hind tibiae and dorsum of tarsi dark brown. Apical portion of anterior of hind femora and anterior of hind tibiae covered with black hairs. Wing covered with microtrichia, without any bare areas. Posterior margin of wing with a series of minute, discrete, closely spaced, black sclerotized dots. Stigma brown yellow.

Abdomen black, narrow, parallel-sided, unmargined. Tergite 2 with long triangular yellow spots laterally, separated from each other widely; anterior margin of spots extending to anterior margin of tergite and posterior margin to 2/3 of tergite; inner margin of spot oblique. Tergite 3 with a broad transverse yellow

band basally, longer than 2/3 of tergite. Tergite 4 with yellow margin posteriorly, basal transverse yellow band long as half as length of tergite. Tergite 5 yellow. Hypopygium black. Tergite 1 covered with brown yellow hairs. Tergites 2 and 3 covered with hairs in same color as that of tergites. Tergites 4 and 5 with hairs black, but tergite 4 with yellow hairs on yellow band laterally.

Male terminalia. Dark. Cerci yellow, covered with yellow hairs. Tergite 9 dark, almost triangular in lateral view. Surstyli black, almost triangular in lateral view, with apical corners blunt; covered with gray hairs and short seta on ventrolateral sides and apical part of inner surface, middle portion of outer surface concave slightly, inner side of the outer surface flat, semilunar. Lingua developed, as long as lateral arms, apical end sharpened. Superior lobes semilunar, dorsal and posterior edges black, apical part of outer surface with a narrow suture. Dorsum of distal portion of aedeagus flat and extending laterally, almost rectangle in dorsal view, with lateral margins more or less contracted at distal part and middle of distal margin slightly projected triangularly. Ventral part of aedeagus base ridged, with lower portion of posterior end extended laterally. Aedeagal apodeme compressed



Figs 1-7. *Lamellidorsum piliflavum* sp. nov. (male) 1. Head of male, lateral view. 2. Antenna. 3. Male terminalia, lateral view. 4. Superior lobe. 5. Dorsum of distal portion of aedeagus. 6. Aedeagus. 7. Abdomen, dorsal view.

laterally.

Female: unknown.

♂ Length: body 9.5 mm, wing 8 mm.

Holotype ♂, Red River Hdlow (34° 04' N, 107° 45' E; 1 000 m), Mei County, Shaanxi Province, China, 1 Sep. 2002, collected by HUO Ke Ke.

Etymology. The specific name is derived from the Latin *pilus* (hairs) and *flavus* (yellow), referring to yellow hairs on scutellum.

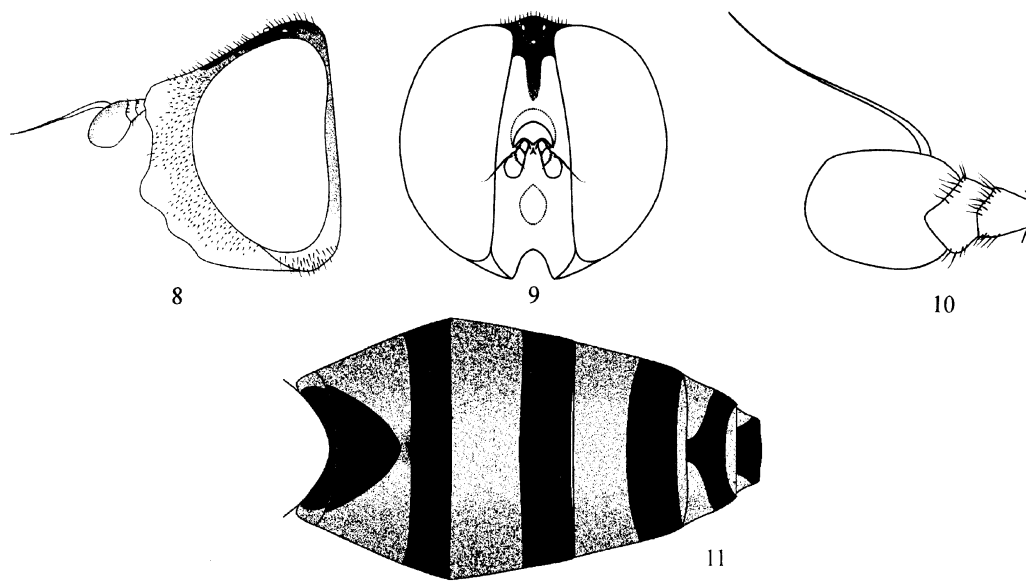
Lamellidorsum pilinigrum sp. nov. (Figs. 8-11)

Female. Head hemisphere. Eyes bare. Vertex black, covered with black hairs. Occiput scattered hoar pollen and with yellow hairs. Frons with black hairs and densely yellowish pollinose laterally, dorsal portion of frontal prominence bare. Frons yellow, with a T-shaped black spot on base, its apical end not extending to antennal prominence. Face yellow, narrow, parallel-sided, with yellow pollen and hairs; facial tubercle bare, small and circular. Cheeks yellow, with yellow hairs. Antennae dark yellow, basal two segments darker; third segment as long as high, with apex broad and circular. Aritsa brown yellow; basal 1/3 thick and covered with minute pubescence; apical 2/3 thin.

Mesonotum black and dark yellow laterally, shining, tinged with bronze; covered with brown yellow hairs. Scutellum yellow, with black hairs, but hairs on anterolateral corners yellow; subscutellar fringe brown yellow and dense. Pleura black, with brown yellow hairs, gray pollinose on following areas: posterior convex parts of mesopleura, frontal end and

upper part of posterior end of sternopleura, anepimera of mesothorax, upper portion of hind stigma, where covered with gray hairs. Anterior flat parts of mesopleura without long and erect hairs. Upper and lower hair patches separated from each other widely throughout. Metasternum bare. A tuft of long hairs on posteromedian apical angle of hind coxa absent. Legs mainly brown yellow, covered with yellow hairs. Coxae and trochanters of middle and hind legs dark brown; 3/5 of hind femora black in middle part; hind tibiae with middle part dark black. Anterior of hind femora covered with short black hairs; hind tibia with short black hairs outside. Wing covered with microtrichia, without any bare areas. Posterior margin of wing with a series of minute, discrete, closely spaced, black sclerotized dots. Stigma brown yellow.

Abdomen black, unmarginated, hind margin of tergite 2 broadest. Tergite 1 yellow laterally. Tergite 2 covered with hairs in same color as that of tergite; basal transverse yellow band more than 2/3 of tergite in length, a triangular black spot at middle of yellow band not extending to hind margin of band. Tergite 3 with black hairs; with a broad transverse yellow band basally which is slightly longer than half of tergite; hind margin yellow narrowly. Tergite 4 is similar to tergite 3, but basal yellow band slightly shorter than half of tergite in length. Tergite 5 yellow, with a black spot Y-shaped inversely, reaching to lateral margin posteriorly. Tergite 6 with anterior corners yellow laterally. Venter yellow brown, sternites 2 to 6 with black spots on middle of lateral margins.



Figs 8-11. *Lamellidorsum pilinigrum* sp. nov. (female). 8. Head, lateral view. 9. Head, frontal view. 10. Antenna. 11. Abdomen, dorsal view.

Male: unknown.

♀. Length: body 9.5 mm, wing 8 mm.

Holotype ♀, Red River Hdlow (34° 04' N, 107° 45' E; 1 000 m), Mei County, Shaanxi Province, China, 1 Sep. 2002, collected by HUO Ke Ke.

The new species is similar to *Lamellidorsum piliflavum* sp. nov., but the former with black hairs on scutellum, tergite 2 yellow, with a triangular black spot anteriorly, middle parts of hind femora and tibia black.

Etymology. The specific name is derived from the Latin *pilus* (hairs) and *nigrum* (black), referring to black hairs on scutellum.

REFERENCES

- Brunetti, E. 1923. Pipunculidae, Syrphidae, Conopidae, Oestridae. Diptera. In: Shipley, A. E. (ed.), The fauna of British India including Ceylon and Burma. (Vol. III). Taylor & Francis, London. 1-424.
- Gurran, C. H. 1928. The Syrphidae of the Malay Peninsula. *J. Fed. Malay States Mus.*, 14: 141-324.
- Fluke, C. L. 1950. The male genitalia of *Syrphus*, *Epistrophe* and related genera (Diptera: Syrphidae). *Trans. Wis. Acad. Sci. Arts Lett.*, 40: 115-148.
- Hippa, H. 1968. A generic revision of the genus *Syrphus* and allied

- genera (Diptera: Syrphidae) in the Palearctic Region, with description of the male genitalia. *Ada Entom. Fenn.*, 25: 70-78.
- Hull, F. M. 1949. The morphology and Inter relationship of the genera of Syrphid Flies, recent and fossil. *Trans. Zool. Soc.*, 26 (4): 257-208.
- Knutson, L. V., Thompson, F. C. and Vockerath, J. R. 1975. Family Syrphidae. In: Mercedes, D. D. and Hardy, D. E. (eds.), A Catalog of the Diptera of the Oriental Region. The University Press of Hawaii, Honolulu. 2: 311-312.
- Lundbeck, W. 1916. Diptera Danica, 5 (Lonchopteridae, Syrphidae). 18-591.
- Peck, L. V. 1988. Syrphidae. In: Soos, A. and Papp, L. (eds.), Catalogue of Palearctic Diptera 8 (Syrphidae, Conopidae). Akad. Kiado, Budapest / Elsevier, Amsterdam. 1-230.
- Shiraki, T. 1930. Die Syrphidea des Japanischen Kaiserreichs, mit Berücksichtigung benachbarter Gebiete. *Mem. Fac. Sci. Agric. Taihoku Imp. Univ.*, 1 (1): 1-446.
- Stubbs, A. E. 1983. British Hoverflies. *Br. Ent. Nat. His. Soc.*, 1-253.
- Verrall, G. H. 1901. British flies. Vol. VIII: Platypetidae, Pipunculidae and Syrphidae of Great Britain. Gurney and Jackson, London. 1-691.
- Vockerath, J. V. 1969. A revision of the genera of the Syrphini (Diptera: Syrphidae). *Mem. Ent. Soc. Can.*, 73-76.
- Xue, W. Q. and Zhao, J. M. 1998. Flies of China, Part I. Liaoning Science and Technology Press, Shenyang, China. 136-138.
- Виноградов, Н. А. 1983. Сирфиды Сибири (Dipt., Syrphidae). АКАДЕМИЯ НАУК СССР. 36-47, 166-175.

中国食蚜蝇科一新属二新种记述 (双翅目, 食蚜蝇科)

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摘要 作者于2002年在秦岭山区进行食蚜蝇科昆虫调查时,发现食蚜蝇科昆虫1新属2新种,记述如下。新种模式标本保存于陕西理工学院陕西省资源生物重点实验室标本馆。

平背食蚜蝇属,新属 *Lamellidorsum* gen. nov.

复眼裸,颜面及额黄色,面中突小而钝圆。触角黄色,第3节近圆形。胸部背面黑色,具青铜色光泽,两侧暗黄色。小盾片黄色,至少两侧前角被黄毛,中胸上前侧片前低平部缺直立长毛,腹侧片上、下毛斑全长宽的分开。后胸腹板裸,后足基节后腹端角缺毛簇。翅面被微毛,无裸区,翅后缘具一系列间隔均匀的骨化黑色小点。腹部狭长,两侧近平行,第3、4背板前部具宽黄带。雄性背针突侧面观近三角形,舌状突顶端尖,与侧臂等长。上叶呈半月形。阳茎端背面平且向两侧扩展呈方形,两侧近端部收缩。阳茎基的腹侧侧扁,后端下部向两侧略扩展。

模式种: 黄毛平背食蚜蝇,新种 *Lamellidorsum piliflavum* sp. nov.

新属近似于狭腹食蚜蝇属 *Meliscaeva* Frey及美蓝食蚜蝇属 *Melangyna* Verrall。与前者区别是中胸上前侧片前低平部无直立长毛,与后者的区别是翅后缘具一系列间隔均匀的骨

化黑色小点,腹部第3~4背板前部具宽黄带。雄性尾器不同。

黄毛平背食蚜蝇,新种 *Lamellidorsum piliflavum* sp. nov. (图1~7)

雄性 头部半球形。头顶黑色,被暗黄色毛,单眼三角被黑毛。额暗黄色,基部覆黄粉,被黑毛,中部被黄毛,额角约50°。颜面暗黄色,覆黄粉及黄毛,面中突小而圆,裸。颊部暗褐色,被黄毛。触角暗黄色,第3节长约等于其高,端部宽圆,触角芒棕黄色裸,基部1/3较粗,被微毛,端部约2/3细。

中胸背板黑色,具青铜色光泽,两侧暗黄色,被棕黄色毛,小盾片黄色,被黄毛,盾下缢密,棕黄色。胸部侧板黑色,中域覆灰粉,被暗黄色毛。中胸上前侧片前低平部缺直立长毛,腹侧片上、下毛斑全长宽的分离。后胸腹板裸,后足基节后腹端角缺毛簇。足主要棕黄色,被黄毛。翅面被微毛,痣棕黄色,翅后缘具一系列间隔均匀的骨化黑色小点。

腹部两侧平行,黑色。第2背板两侧具长三角状黄斑。第3背板基部具宽黄带,长大于背板长的2/3。第4背板基部黄带约为背板长的1/2,背板后缘具黄边。第5背板黄色。露尾节黑色。第1背板被棕黄色毛,第2、3背板被毛同底

色，第4背板及其后部各节被黑毛，第4背板黄带两侧被黄毛。

雄性尾器，暗黑色。尾须黄色，被黄毛。第9背板暗黑色。背针突暗黑色，被灰白色毛，角钝圆，腹侧缘及内侧表面端部被短刺毛，外侧表面中央略下陷，外表面的内侧部平，呈半月形。第9腹板舌状突发达。上叶半月形，背侧及后侧黑色，外表面顶端有狭缝。阳茎端背面平且向两侧扩展呈长方形，两侧近端部收缩。阳茎基的腹侧侧扁，后端下部向两侧略扩展。阳茎表皮内突左右侧扁。

雌性 未知。

♂体长 9.5 mm, 翅长 8.0 mm。

关键词 双翅目，食蚜蝇科，新属，新种，中国.

中图分类号 Q969.452.7

正模 ♂, 2002-09-01, 陕西眉县（红河谷，海拔 1 000 m）, 霍科科采。

黑毛平背食蚜蝇，新种 *Lamellidorsum pilinigrum* **sp. nov.** (图 8~ 11)

雄性 未知。

♀ 体长 9.5 mm, 翅长 8.0 mm。

正模 ♀, 2002-09-01, 陕西眉县（红河谷，海拔 1 000 m）, 霍科科采。

新种与黄毛平背食蚜蝇近似，但其小盾片被黑毛，第2背板具黄带，黄带中央具三角形黑斑，后端不达黄带后缘，后足腿节及胫节中部黑褐色。